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Testimony before the Senate Select Committee on Nutrition and Human Needs; by Dean K. Crowther, Deputy Director, Program Analysis Div.

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One purpose of the National School Lunch Program (NSLP) is to safeguard schoolchild health by improving or maintaining levels of nutrition. A specified food pattern is required for the Type A Lunch which is expected to provide one-third of a child's daily nutritional needs. The program can help to reduce problems arising from malnutrition, but research is needed to extend knowledge of effects of nutrition on health. The Department of Agriculture has not completed a satisfactory evaluation of NSLP's impact on schoolchild health. NSLP is an important part of nourishment for many children but, because of the diversity of nutritional problems, the standard lunch may not be the best approach. The present Type A pattern for lunches cannot be relied upon to provide one-third of a child's recommended dietary allowance. Less than 60% of children enrolled in NSLP schools participate in the program, and about 15% of lunches bought are thrown away. The Secretary of Agriculture should: conduct a study to determine nutritional standards to safeguard health, prescribe meal requirements in terms of nutritional standards, and promote nutrition education. (HTW)

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Statement of  
Dean K. Crowther  
Deputy Director of the Program Analysis Division  
of the U.S. General Accounting Office  
before the  
Select Committee on Nutrition and Human Needs  
United States Senate  
on  
The National School Lunch Program

Mr. Chairman and Members of the Committee:

We appreciate the opportunity of being here this morning to discuss the National School Lunch Program--the largest of several Federally funded child-feeding programs.

The National School Lunch Program (NSLP) has two purposes:

- to safeguard schoolchild health, by improving and/or maintaining levels of nutrition; and
- to strengthen the agricultural economy, by stimulating food demand.

To these ends, the Secretary of Agriculture requires that program lunches be designed according to a specified food pattern--called the Type A Lunch. The resulting meal is expected to provide, on the average, one-third of a child's daily nutritional needs.

The school lunch program is now available to some 91 percent of the Nation's schoolchildren, and serves over 4.1 billion lunches a year. Nearly 26 million children are fed each day. About 2 out of every 5 children receive their meals free or at a price of 20 cents or less.

The Federal Government contributed over \$1.9 billion in cash and commodities to support the fiscal year 1976 school lunch program.

#### Perspective

Today I would like to concentrate on the nutritional effectiveness of the school lunch program--its ability to safeguard schoolchild health.

My statement is based primarily on our recent report, "The National School Lunch Program--Is It Working?". I will also use information from:

- (1) a study of "Federal Human Nutrition Research," that we are doing for your Committee; and
- (2) a study of certain nutritional and food quality aspects of the school lunch program, that we are doing for Congressman Frederick W. Richmond.

The purpose of our "school lunch report" was to bring together the vast amount of research that had been done on topics either directly or indirectly affecting NSLP--to determine how well the program had been evaluated. Naturally, the work involved an extensive search of both Government and private literature sources; the appraisal of a considerable amount of material for technical quality and its relevance to the current program; and the assistance of persons knowledgeable in the nutritional sciences.

To appraise the extent to which NSLP's effectiveness in safeguarding schoolchild health had been evaluated, we organized the available information to answer three fundamental questions:

- (1) What is good nutrition and how does it affect health?
- (2) What are the nutrition problems confronting today's schoolchildren? and
- (3) Can, and does, the school lunch program have a beneficial impact on schoolchild health?

## Nutrition/Health Relationships

The National Academy of Sciences' Recommended Dietary Allowances (RDA) prescribe, for various age-sex groups, a daily amount of 18 essential nutrients which are expected to satisfy the known nutritional needs of practically all healthy persons. The RDA are widely accepted as the Nation's standards for good nutrition. They are used by nutritionists, dieticians, consumers, and the school lunch program, whose nutritional target is to furnish at least one-third of the RDA.

But, while the job of defining the requirements for essential nutrients--such as protein, calories, iron, and vitamin C--is an important and uncompleted task, the concept of malnutrition now includes food and nutrient excesses as well as deficiencies. Effective nutrition requires more than simply consuming a "standard" quantity of nutrients.

Today it is recognized that nutrition plays a vital role in health status throughout life. There is evidence in children, for example, that

--anemia affects motivation and the ability to concentrate;

--severe malnutrition affects intellectual development, and can produce permanent stunting; and

--obesity may contribute to coronary heart disease in later years.

We believe that, with existing knowledge, the school lunch program can mitigate against these problems. We also believe that there is a clear need to refine and extend this knowledge through further research:

to (1) define the processes by which dietary constituents lead to the

onset and development of disease, and (2) evaluate the effects of dietary modifications proposed as preventive measures.

To date, the Department of Agriculture has not completed a satisfactory evaluation of NSLP's impact on schoolchild health. A determination of whether the program's influence is beneficial, neutral, or adverse has not been made. Our report levied heavy criticism on the Department for this shortcoming.

But our criticism of the evaluation effort is one thing; our opinion of the program's actual performance, and its potential to support schoolchild health, are quite another. We believe:

--That the program can, and should, have a beneficial impact on schoolchild health;

--That it can be evaluated; and

--That, although much remains to be learned about nutrition, we have the knowledge, now, to better insure that the program is safeguarding health.

#### The Schoolchild's Nutrition Problem

The NSLP's impact as a nutrition program depends largely on how well the program lunch complements the home diet in meeting a child's total, or 24-hour, nutritional needs. The lunch itself is a supplement; its one-third RDA standard, in isolation, is incomplete.

To gain an insight into the nutritional problems confronting schoolchildren, and their dietary needs, we compared the findings of three of the Nation's largest nutritional surveys. Each survey

found substantial evidence of malnutrition among school-age children. But, in nearly all cases, the malnutrition was without visible signs-- it was detected through the coordinated analysis of dietary intake data, biochemical specimens, and anthropometric measurements (such as skin-fold thickness).

The results of our work indicate that:

- The NSLP is a very important part of nourishment for many children and does, in fact, increase 24-hour nutrient intakes.
- Income-poverty guidelines, as presently used in the free lunch program, are the best known means of selectively targeting NSLP to reach nutritionally-needy children. A greater number of "needy" children exist in the higher-income groups, but the "density-of-need" is greatest among children from low-income families.
- On a Nation-wide scale, the major problems appear to be: underweight children; overweight children; and children with iron deficiency or iron deficiency with anemia. The mean protein intakes of all children appear to be well in excess of RDA standards, ranging from 146 percent to 215 percent of the RDA.
- Characteristics of malnutrition are often unique to specific localities and/or population groups.

Because of the diversity of nutritional problems found among schoolchildren, we are not sure that the NSLP's requirement for all children to be served a uniform "standard lunch" is the best choice

for a nutritional standard. We believe that:

- Present meal standards place undue emphasis on high-cost protein. The NSLP lunch's protein requirement does not appear to be driven by nutritional needs. A relaxation of the requirement may provide "nutritionally adequate" meals at lower costs.
- Reinforcement levels greater than one-third RDA are needed for nutrient iron as well as other vitamins/minerals for which major deficiencies have been found in some segments of the population.
- Variations of caloric intakes are needed. Sizeable numbers of both underweight and overweight children participate in the program; a single meal-standard, designed to meet the needs of underfed children, increases the risk of obesity in others.

#### School Lunch Program's Impact on Schoolchild Health

While it seems obvious that the school lunch program is contributing to the nutritional health of at least some children, the several studies undertaken by the Department to substantiate this fact have all been inconclusive. Most of the studies focused on the program's ability to improve iron levels. Not one found any indication to suggest that participating students fared any better than nonparticipants over a school year.

On the other hand, substantial improvements in nutritional health have been demonstrated in studies where the school lunch program was combined with either a low-lactose supplement or the school breakfast. The

problem may be the lunch itself. Our study found it to be weak in iron reinforcement.

We also found indications that the program could be contributing to obesity in some children. I want to especially point out that the obesity issue is by no means demonstrated, but it is a potential hazard faced by the school lunch and, for that matter, any other large-scale feeding program.

In a \$4 billion program, supported by nearly 2 billion Federal dollars, we believe that the Congress and the Department of Agriculture should have better information than has been available on the program thus far. To be sure of what the program is doing; to make it more effective, and to safeguard against the possibility of adverse side-effects; our formal report recommends that the Department of Agriculture conduct, with the advice and assistance of the Department of Health, Education, and Welfare, a formal evaluation of NSLP's impact on school-child health.

#### The Type A Lunch

The heart of the current school lunch program is the Type A meal pattern. This pattern--not the nutritional requirement of one-third RDA--is the requirement set forth for participating schools. A Type A lunch consists of one-half pint of fluid milk; two ounces of lean meat; three-fourths of a cup of two or more vegetables or fruits; and one slice of bread--with acceptable substitutes permitted for each component except milk.

I am submitting for the record a supplementary statement which presents the results of a study GAO undertook at the request of Congressman Richmond. The study included, among other things, findings regarding food waste, microbiological safety and quality, and certain tests of the Type A pattern -- including nutrient content. I will briefly summarize the latter here:

- (1) A sample of NSLP lunches served in New York City was tested using weights and measures against portions specified by the Type A pattern. At least 40 percent of the program lunches served (between January 10 and February 22, 1977) failed to meet the pattern's requirements. Since our review, the USDA has informed us that it has taken initial steps to improve its monitoring efforts. However, much more needs to be done to ensure compliance with Federal school lunch requirements.
- (2) Of 60 "regulation-size" Type A lunches obtained from New York, Cleveland, and Los Angeles, laboratory tests showed that, over time, they provided significantly less than one-third RDA in 8 of 13 nutrients -- vitamin A, iron, magnesium, calories, thiamine, calcium, vitamin B6, and zinc.

Though nutrient deficiencies reported for this sample of lunches is somewhat greater than those found in several USDA studies we analyzed in our July report, all studies agree that the Type A pattern does not, in general, insure that the Type A lunch will provide one-third of a schoolchild's RDA.

In contrast to a meal designed to achieve a specified nutrient goal, the Type A pattern restricts the form and content of an NSLP lunch. Milk, for example, is mandatory whether or not juice or a dairy alternate is included; and two or more vegetables or fruits must be served.

Many school food service directors believe that the present Type A pattern results in lunches which are not in keeping with today's eating habits. They say the pattern (1) increases meal costs, (2) contributes to food waste, and (3) discourages paying students from participating in the program. Alternatively, an equal number of school food service directors, and the Department, support the "pattern-concept" for its ability to (1) provide an easy-to-follow standard for local meal planners that will assure the nutritional integrity of program lunches, and (2) serve as a tool for teaching children about food and nutrition. They indicate that the program's problems with food waste and participation can be overcome by increasing the emphasis on nutrition education, and requiring greater student and parent involvement in menu planning activities.

We are convinced that the present Type A pattern, as currently structured, cannot be relied upon to provide one-third of a schoolchild's RDA. And, we have serious questions as to whether or not a standard "one-third RDA" lunch is the best choice for complementing a schoolchild's home diet. For these reasons, our school lunch report recommended that the Secretary of Agriculture:

--Conduct a study, with assistance from HEW, to determine the nutritional standards that will best safeguard schoolchild health.

Food does little good unless it is eaten. Less than 60 percent of the children presently enrolled in NSLP schools participate in the program. Of the lunches bought, 15 percent -- about \$290 million of food in fiscal year 1976 -- is thrown into the garbage pail. Our report, and other publications of our Office suggest a number of actions for improving participation and reducing food waste -- many of which are directly dependent upon the attitudes of local administrators.

We believe that the Secretary of Agriculture should prescribe NSLP meal requirements in terms of nutritional standards, and meal patterns conforming to these standards. Compliance with either would be deemed to fulfill the Federal requirement. In the hands of an innovative meal planner either a pattern or nutritional requirement would be essentially the same; however, we would encourage flexibility to increase program participation -- particularly by those children who are presently consuming non-nutritious, or "junk," foods off-campus at lunch time.

Ultimately, there is the question of "who safeguards health when children grow beyond their school years?". Studies indicate that nutrition education helps develop proper eating habits and reduces plate waste. Yet, it receives comparatively low priority with school administrators responsible for curriculum planning. Such courses generally

consist of identification of the "basic four" food groups, and are based on the presumption that the typical American diet is ideal. However, since the "normal" American dietary practices may predispose a large percentage of our population to premature cardiovascular disease and possibly to other acute and chronic debilities, it may be desirable to shift the emphasis on nutrition education from conceiving it as a passive, abstract discipline to a viable, active part of preventive health. We believe nutrition education needs to deal with current food trends. It needs to identify food as more than a mere composite of RDA nutrients. Improved nutrition education involves disseminating appropriate knowledge on extenders, saturated fats, fibers, preservatives, and other food constituents present in today's market.

Our Office has recommended that the Secretary of Agriculture undertake greater promotion of nutrition education in a number of reports. We support the legislation calling for expanded nutrition education which is presently before a House-Senate Conference Committee. We also support USDA's proposed NSLP regulation changes encouraging nutrition education.

Mr. Chairman, this concludes our prepared statement. We would be happy to respond to any questions.

STATEMENT FOR THE RECORD DURING HEARINGS 30 SEP 1977  
BEFORE THE  
SENATE SELECT COMMITTEE ON  
NUTRITION AND HUMAN NEEDS  
ON NUTRITIONAL AND FOOD QUALITY ASPECTS OF  
THE NATIONAL SCHOOL LUNCH PROGRAM

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

WE ARE HERE TODAY AT THE REQUEST OF THE COMMITTEE TO DISCUSS THE SCHOOL LUNCH PROGRAM--THE LARGEST OF THE SEVERAL FEDERALLY FUNDED CHILD-FEEDING PROGRAMS. THE FOOD AND NUTRITION SERVICE, DEPARTMENT OF AGRICULTURE, ADMINISTERS THE PROGRAM THROUGH STATE EDUCATION AGENCIES. OUR OFFICE IS COMPLETING A REVIEW OF CERTAIN NUTRITIONAL AND FOOD QUALITY ASPECTS OF THE PROGRAM PURSUANT TO A REQUEST BY CONGRESSMAN FREDERICK W. RICHMOND. GAO'S STATEMENT TODAY WILL SUMMARIZE OUR FINDINGS AND OUR SUGGESTIONS FOR IMPROVING THE SCHOOL LUNCH PROGRAM.

THE SCHOOL LUNCH PROGRAM OPERATES IN THE 50 STATES, THE DISTRICT OF COLUMBIA, PUERTO RICO, GUAM, THE VIRGIN ISLANDS, AMERICAN SAMOA, AND THE TRUST TERRITORY OF THE PACIFIC ISLANDS. IN FISCAL YEAR 1976, OVER 4.1 BILLION LUNCHESES WERE SERVED IN NEARLY 90,000 SCHOOLS PARTICIPATING IN THE PROGRAM. DURING THE PEAK MONTH (NOVEMBER) IN SCHOOL YEAR 1976-77, ABOUT 25.8 MILLION CHILDREN WERE SERVED LUNCHESES DAILY. THE VALUE OF FEDERAL CASH AND COMMODITIES PROVIDED TO THE SCHOOL LUNCH PROGRAM WAS ABOUT \$1.9 BILLION IN FISCAL YEAR 1976.

## NUTRITION PROVIDED BY LUNCHESES

THE NATIONAL SCHOOL LUNCH ACT (42 U.S.C. 1758) REQUIRES THAT LUNCHESES SERVED BY PARTICIPATING SCHOOLS MEET NUTRITIONAL STANDARDS PRESCRIBED BY THE SECRETARY OF AGRICULTURE. THE SECRETARY HAS DETERMINED THAT, AS A GOAL, SCHOOL LUNCHESES SHOULD, OVER TIME, PROVIDE ONE-THIRD OF THE NUTRITION CALLED FOR BY THE RECOMMENDED DIETARY ALLOWANCES (RDA) DEVELOPED BY THE NATIONAL ACADEMY OF SCIENCES. TO ACHIEVE THIS GOAL, THE SECRETARY REQUIRES THAT SCHOOL LUNCHESES CONTAIN PRESCRIBED QUANTITIES OF VARIOUS TYPES OF FOODS. THE REQUIRED MEAL PATTERN IS BASED ON THE NUTRITIONAL NEEDS OF 10-TO-12 YEAR OLD CHILDREN AND IS COMMONLY CALLED THE TYPE A LUNCH.

TYPE A LUNCHESES ARE REQUIRED TO CONTAIN TWO OUNCES OF MEAT OR OTHER HIGH PROTEIN FOOD, THREE-QUARTERS CUP OF TWO OR MORE FRUITS AND/OR VEGETABLES, ONE SLICE OF ENRICHED BREAD, AND ONE HALF PINT OF FLUID MILK. ADJUSTMENTS IN THE QUANTITIES REQUIRED BY THE TYPE A PATTERN ARE PERMITTED FOR YOUNGER AND OLDER CHILDREN.

ALTHOUGH SCHOOL LUNCHESES ARE NOT SPECIFICALLY REQUIRED TO PROVIDE ONE-THIRD RDA, THE TYPE A PATTERN WAS DESIGNED TO ACHIEVE THE GOAL OF ONE-THIRD RDA OVER TIME, EXCEPT FOR CALORIES. HOWEVER, INDEPENDENT LABORATORY TESTS WE SPONSORED SHOWED THAT ADHERING TO THE TYPE A PATTERN DOES NOT ENSURE THAT THIS GOAL WILL BE ACHIEVED.

WE CONTRACTED WITH THE WARF INSTITUTE IN MADISON, WISCONSIN--NATIONALLY RECOGNIZED EXPERTS IN NUTRITIONAL

TESTING--TO TEST 60 SCHOOL LUNCHES WE OBTAINED FROM 12 ELEMEN-  
TARY SCHOOLS IN THREE CITIES--NEW YORK, CLEVELAND, AND  
LOS ANGELES. ALTHOUGH IT WAS NOT FEASIBLE FOR US TO SELECT A  
SCIENTIFIC RANDOM SAMPLE OF LUNCHES FOR THIS PHASE OF OUR WORK,  
WE SELECTED SCHOOLS SERVING TYPES OF MEALS COMMONLY SERVED TO  
10-TO-12 YEAR OLD CHILDREN IN THE RESPECTIVE CITIES.

FOR FIVE CONSECUTIVE DAYS IN EACH OF THE 12 SCHOOLS, WE  
PURCHASED SCHOOL LUNCHES JUST LIKE THE ONES BEING SERVED TO  
THE CHILDREN. WE MEASURED THE LUNCHES AND SUPPLEMENTED THEM  
IF NECESSARY TO MAKE SURE THEY MET THE REQUIREMENTS OF THE  
TYPE A LUNCH PATTERN. IN ACCORDANCE WITH DETAILED INSTRUCTIONS  
PROVIDED BY WARF, WE PACKED AND FROZE THE LUNCHES AND SHIPPED  
THEM TO WARF IN DRY ICE; THEY ARRIVED AT WARF STILL FROZEN AND  
IN EXCELLENT CONDITION. WARF RAN TESTS TO DETERMINE THE  
QUANTITIES OF 13 DIFFERENT NUTRIENTS CONTAINED IN THE LUNCHES.  
THE RESULTS WERE ANALYZED TO SEE WHETHER EACH SCHOOL'S LUNCHES  
PROVIDED ONE-THIRD OF THE RDA FOR 10-TO-12 YEAR OLD CHILDREN  
OVER THE 5 DAY PERIOD.

THE CURRENT TYPE A PATTERN IS BASED ON THE 1968 VERSION  
OF RDA WHICH INCLUDED 17 NUTRIENTS. WE TESTED FOR 12 OF THESE  
NUTRIENTS PLUS ZINC, WHICH WAS ADDED TO THE RDA IN 1974. ON  
THE RECOMMENDATIONS OF PROFESSIONAL NUTRITIONISTS, WE DID NOT  
RUN TESTS ON THE OTHER FIVE NUTRIENTS IN THE RDA BECAUSE RE-  
LIABLE TESTING TECHNIQUES WERE NOT AVAILABLE OR BECAUSE IT WAS  
VERY UNLIKELY THAT THERE WOULD BE SHORTAGES.

THE TESTS SHOWED THAT, OVER THE 5 DAYS, THE LUNCHES FROM EACH SCHOOL PROVIDED THE RECOMMENDED AMOUNTS OF 5 OF THE 13 NUTRIENTS--PROTEIN, PHOSPHORUS, NIACIN, IODINE, AND VITAMIN C. HOWEVER, THERE WERE SIGNIFICANT SHORTAGES (MORE THAN 5 PERCENT OF RDA) AT EACH OF THE 12 SCHOOLS IN ONE OR MORE OF THE OTHER 8 NUTRIENTS. FOR EXAMPLE, LUNCHES FROM 7 OF THE 12 SCHOOLS HAD DEFICIENCIES OF 19 TO 50 PERCENT IN VITAMIN A; 9 SCHOOLS HAD DEFICIENCIES OF 13 TO 42 PERCENT IN IRON; AND ALL 12 SCHOOLS HAD DEFICIENCIES OF 5 TO 35 PERCENT IN MAGNESIUM. LUNCHES FROM ALL 12 SCHOOLS ALSO HAD DEFICIENCIES OF 7 TO 42 PERCENT IN ZINC. THERE ALSO WERE LESSER DEFICIENCIES IN CALORIES, THIAMINE, CALCIUM, AND VITAMIN B6.

WE BELIEVE THESE TESTS INDICATE THAT THE TYPE A PATTERN IS NOT ADEQUATE TO ENSURE ACHIEVEMENT OF THE PROGRAM'S NUTRITIONAL GOAL. THE DEPARTMENT RECENTLY PROPOSED A NEW LUNCH PATTERN GIVING SCHOOLS MORE FLEXIBILITY IN ACHIEVING ONE-THIRD RDA FOR DIFFERENT AGE GROUPS, BUT THE ONLY RELEVANT CHANGE FOR 10-TO 12-YEAR OLDS IS THAT EIGHT SLICES OF BREAD WILL BE REQUIRED EACH WEEK INSTEAD OF FIVE. ALSO, ALTERNATIVES TO BREAD, SUCH AS RICE OR MACARONI, WOULD BE PERMITTED. EXCEPT FOR CALORIES, THESE CHANGES DO NOT APPEAR SUFFICIENT TO OVERCOME THE NUTRITIONAL SHORTAGES INDICATED BY OUR CONTRACTOR'S TESTS.

THE DEPARTMENT NEEDS TO FURTHER MODIFY THE SCHOOL LUNCH REQUIREMENTS IF THE GOAL OF PROVIDING ONE-THIRD RDA IS TO BE ACHIEVED. INCREASING THE QUANTITIES OF FOOD REQUIRED BY THE TYPE A PATTERN MAY NOT BE A SATISFACTORY SOLUTION BECAUSE SOME

FOODS MIGHT BE INCREASED TO EXCESSIVE QUANTITIES AND BECAUSE, AS DISCUSSED LATER IN THIS STATEMENT, CHILDREN FREQUENTLY DO NOT EAT ALL OF THE FOOD SERVED TO THEM IN SCHOOL LUNCHES. NEW APPROACHES MAY BE NEEDED; CONSIDERATION SHOULD BE GIVEN TO OPTIONAL USE OF A STANDARD REQUIRING SPECIFIC NUTRIENT CONTENT (AS DISCUSSED LATER IN THIS STATEMENT), CAREFUL EXPANSION OF THE USE OF ENRICHED FOODS, MORE DECENTRALIZED AND MORE FLEXIBLE MENU PLANNING, OR OTHER INNOVATIVE TECHNIQUES.

#### MICROBIOLOGICAL QUALITY AND SAFETY OF LUNCHES

TO OBTAIN AN INDICATION OF WHETHER SCHOOL LUNCHES ARE OF GOOD QUALITY AND SAFE TO EAT ACCORDING TO MICROBIOLOGICAL TESTS, WE CONTRACTED WITH PRIVATE LABORATORIES IN THE THREE CITIES TO OBTAIN SAMPLE LUNCHES AND CONDUCT BACTERIA TESTS. THE LABORATORIES PICKED UP 60 ADDITIONAL LUNCHES FROM THE SCHOOLS AND TESTED THEM FOR RECOGNIZED INDICATORS OF QUALITY AND SAFETY--TOTAL BACTERIA PLATE COUNT, FECAL COLIFORM, E.COLI, STAPHYLOCOCCUS, SALMONELLA, SHIGELLA, AND CLOSTRIDIUM PERFRINGENS.

THERE ARE NO NATIONAL STANDARDS FOR BACTERIAL CONTENT IN SCHOOL LUNCHES OR FOR TESTING PRACTICES OTHER THAN FOR MILK. ACCORDINGLY, THE LABORATORIES TESTED LUNCHES IN ALL THREE CITIES AGAINST THE NEW YORK CITY HEALTH CODE STANDARD FOR BACTERIAL CONTENT SO THAT ALL OF OUR TEST RESULTS WOULD BE BASED ON THE SAME STANDARD.

A FOOD AND DRUG ADMINISTRATION (FDA) OFFICIAL AND AN INDEPENDENT MICROBIOLOGIST EXPLAINED THAT THE NEW YORK CITY

STANDARDS CONTAIN SAFETY MARGINS. THEY REVIEWED THE RESULTS OF THE TESTS WE HAD CONDUCTED AND, ALTHOUGH 20 OF THE 240 BACTERIAL READINGS EXCEEDED NEW YORK CITY STANDARDS BY SMALL AMOUNTS, THEY CONCLUDED THAT ALL THE LUNCHES WERE SAFE TO EAT BECAUSE EACH OF THE READINGS EXCEEDING THE STANDARDS WAS WITHIN THE SAFETY MARGINS.

STATE AND LOCAL STANDARDS FOR BACTERIA IN SCHOOL LUNCHES VARY CONSIDERABLY. IN 1975, FDA ESTIMATED THAT ONLY HALF OF THE STATES HAD OR WERE IN THE PROCESS OF ESTABLISHING BACTERIAL STANDARDS OR GUIDELINES FOR FOODS. ACCORDING TO AN FDA ANALYSIS, STATE STANDARDS AND GUIDELINES VARY BY FOODS COVERED, TYPES OF BACTERIA, AND PERMISSIBLE LEVELS OF THE BACTERIA. SOME STATES APPLY STANDARDS FOR BACTERIAL LEVELS EQUALLY TO ALL FOODS. OTHER STATES HAVE LEVELS FOR ONLY ONE OR TWO SPECIFIC FOOD ITEMS.

ALTHOUGH SOME LOCAL BACTERIAL TESTING WAS BEING PERFORMED IN EACH OF THE THREE CITIES WE VISITED, THE TESTING PRACTICES VARIED GREATLY. FOR INSTANCE, ONE CITY REGULARLY TESTED FROZEN ITEMS FOR EACH OF THE BACTERIA FOR WHICH WE HAD TESTS CONDUCTED. GENERALLY, ITEMS PURCHASED EITHER FRESH OR CANNED WERE TESTED FOR BACTERIA ONLY WHEN SOMETHING APPEARED WRONG WITH THEM OR WHEN SOMEONE COMPLAINED ABOUT THEM.

IN ANOTHER CITY TWO BACTERIAL READINGS WERE TAKEN DURING THE INITIAL COOKING OF RAW FOODS--TOTAL BACTERIA PLATE COUNT AND COLIFORM. IF EITHER COUNT WAS EXCESSIVE, THE LABORATORY CONDUCTED OTHER TESTS AS NEEDED. THIS PROCEDURE WAS ALSO

APPLIED TO FROZEN FOODS AND CANNED GOODS IF SOMETHING SEEMED WRONG WITH THEM.

IN THE THIRD CITY FROZEN FOODS WERE TESTED FOR YEAST, MOLD, COLIFORM, AND TOTAL PLATE COUNT. ALL FOODS WERE TESTED BY KITCHEN STAFFS FOR FRESHNESS, TEMPERATURE, AND TASTE, AND THE EQUIPMENT USED IN PREPARING THE FOOD WAS TESTED FOR BACTERIA.

DESPITE THE INCONSISTENCIES IN LOCAL TESTING PRACTICES AND STANDARDS, VARIOUS EXPERTS IN BACTERIA TESTING TOLD US THAT MINIMUM NATIONAL STANDARDS FOR SCHOOL LUNCHES, ALTHOUGH THEORETICALLY DESIRABLE, ARE NOT PRACTICAL OR ARE NOT JUSTIFIED BY THE SMALL NUMBER OF CASES OF ILLNESS CAUSED BY CONTAMINATED FOODS. WE FIND IT DIFFICULT TO ARGUE WITH THIS LOGIC. IF LOCALITIES ARE GOING TO CONTINUE CONDUCTING BACTERIAL TESTS, HOWEVER, IT MIGHT BE WORTHWHILE FOR THE DEPARTMENT OF AGRICULTURE TO GIVE THE IDEA OF UNIFORM TESTING PRACTICES AND STANDARDS SOME FURTHER THOUGHT.

#### MEETING TYPE A LUNCH REQUIREMENTS

IN A SEPARATE SERIES OF TESTS, WE USED STATISTICAL SAMPLING TECHNIQUES TO ESTIMATE THE NUMBER OF SCHOOL LUNCHES SERVED IN NEW YORK CITY SCHOOLS THAT FAILED TO MEET TYPE A REQUIREMENTS FOR QUANTITY AND TYPE OF FOOD SERVED DURING A 6-WEEK PERIOD IN JANUARY AND FEBRUARY 1977.

WE HAD TESTS MADE OF EACH TYPE OF LUNCH SERVICE IN NEW YORK CITY SCHOOLS--CAFETERIA STYLE, MEAL PACK, BASIC (SOUP AND SANDWICH), AND BULK (PREPARED-FROZEN COMPONENTS). WE

PICKED UP THE LUNCHES AND DELIVERED THEM TO DIETITIANS AT A VETERANS ADMINISTRATION HOSPITAL IN NEW YORK CITY WHO TESTED THE LUNCHES FOR COMPLIANCE WITH TYPE A REQUIREMENTS.

FROM OUR SAMPLE WE ESTIMATE, WITH 90 PERCENT CERTAINTY, THAT AT LEAST 40 PERCENT OF THE SCHOOL LUNCHES SERVED IN NEW YORK CITY DURING OUR TEST PERIOD DID NOT MEET TYPE A REQUIREMENTS; FEDERAL REIMBURSEMENT FOR THESE NONCOMPLYING LUNCHES WOULD BE AT LEAST \$3.7 MILLION. FACTORS CONTRIBUTING TO THIS SITUATION WERE THAT ABOUT 20 PERCENT OF NEW YORK CITY SCHOOLS DID NOT HAVE SCALES TO WEIGH MEAL COMPONENTS AND 16 PERCENT DID NOT HAVE PRE-PORTIONED SERVING UTENSILS TO ENSURE THAT QUANTITIES REQUIRED BY THE TYPE A PATTERN WERE BEING SERVED. THE RESULTS OF THESE TESTS ARE DESCRIBED IN MORE DETAIL IN OUR JUNE 15, 1977, REPORT TO THE SECRETARY OF AGRICULTURE (CED-77-89), A COPY OF WHICH IS ATTACHED TO THIS STATEMENT.

THE DEPARTMENT OF AGRICULTURE HAS DELEGATED RESPONSIBILITY FOR MONITORING THE SCHOOL LUNCH PROGRAM TO THE NEW YORK STATE DEPARTMENT OF EDUCATION. ALTHOUGH AGRICULTURE REQUIRES COMPLIANCE WITH THE TYPE A PATTERN, IT DOES NOT SPECIFY HOW COMPLIANCE IS TO BE TESTED. THE STATE'S REVIEWS HAVE BEEN CONCERNED PRIMARILY WITH CHILDREN'S ELIGIBILITY TO RECEIVE FREE OR REDUCED PRICE LUNCHES AND WITH PROGRAM ACCOUNTABILITY, AND ONLY LIMITED ATTENTION HAS BEEN GIVEN TO COMPLIANCE WITH TYPE A REQUIREMENTS. THE STATE HAD NEVER WITHHELD PROGRAM FUNDS FROM NEW YORK CITY BECAUSE OF TYPE A NONCOMPLIANCE.

IN MARCH 1977, WE BRIEFED THE DEPARTMENT, THE STATE, CITY SCHOOL OFFICIALS, AND CONGRESSMAN RICHMOND ON THE RESULTS OF OUR TESTS. AT THE CONGRESSMAN'S REQUEST, A JOINT FEDERAL, STATE, AND CITY TASK FORCE EVALUATED NEW YORK CITY'S SCHOOL LUNCH PROGRAM AND MADE RECOMMENDATIONS TO CORRECT IDENTIFIED PROBLEMS. TESTING AND MONITORING OF TYPE A LUNCH REQUIREMENTS IS TO BE EXPANDED AND EMPHASIZED BY THE DEPARTMENT AND THE STATE IN THE 1977-78 SCHOOL YEAR.

FAILURE TO MEET THE TYPE A REQUIREMENTS RESULTS IN SCHOOL CHILDREN BEING FURTHER SHORT-CHANGED IN RECEIVING THE NUTRIENTS WHICH THE FEDERALLY SUBSIDIZED LUNCH IS DESIGNED TO PROVIDE. WE FIRST RECOMMENDED BACK IN MARCH THAT THE DEPARTMENT DETERMINE THE EXTENT TO WHICH THE PROBLEM OF NONCOMPLIANCE WITH THE TYPE A LUNCH REQUIREMENTS FOUND IN NEW YORK CITY IS A NATIONWIDE PROBLEM. THE DEPARTMENT HAS ACKNOWLEDGED THIS TO BE A NATIONWIDE PROBLEM AND HAS TAKEN INITIAL STEPS TOWARD REQUIRING BETTER MONITORING OF COMPLIANCE WITH THE TYPE A REQUIREMENTS. HOWEVER, MUCH MORE NEEDS TO BE DONE; THE DEPARTMENT SHOULD DEVELOP SPECIFIC INSTRUCTIONS ON HOW FEDERAL, STATE, AND LOCAL MONITORING IS TO BE PERFORMED. DEPARTMENT OFFICIALS TOLD US THEY PLAN TO DEVELOP SUCH INSTRUCTIONS.

#### FOOD WASTE

FOOD WASTE HAS LONG BEEN A RECOGNIZED PROBLEM IN THE SCHOOL LUNCH PROGRAM AND HAS BEEN DISCUSSED IN SEVERAL EARLIER REPORTS BY OUR OFFICE. OUR RECENT OBSERVATIONS OF MEALS SERVED IN NEW YORK CITY SCHOOLS CONFIRMED OUR EARLIER FINDINGS.

WE FOUND THAT CHILDREN CONSISTENTLY REJECTED VEGETABLE ITEMS AS WELL AS FRUITS AND MILK.

SCHOOL LUNCH PROGRAM PERSONNEL MENTIONED THE FOLLOWING FACTORS AS CONTRIBUTING TO PLATE WASTE:

- LACK OF NUTRITION EDUCATION AMONG THE CHILDREN AT HOME AND UNFAMILIARITY WITH MANY VEGETABLE ITEMS DUE TO CULTURAL AND ETHNIC DIFFERENCES IN NEW YORK CITY.
- POOR LUNCHROOM ATMOSPHERE AND CONDITIONS, SUCH AS SHORT AND HURRIED LUNCH PERIODS AND LACK OF ADEQUATE SUPERVISION OF STUDENTS.
- PEER GROUP PRESSURES NOT TO EAT CERTAIN FOODS.
- THE CHILDREN TIRE OF EATING THE SAME FOOD ITEMS OVER AND OVER AGAIN.

THESE ARE IN LINE WITH THE REASONS CITED IN OUR JANUARY 31, 1977, REPORT ENTITLED "THE IMPACT OF FEDERAL COMMODITY DONATIONS ON THE SCHOOL LUNCH PROGRAM" (CED-77-32).

ALTHOUGH THESE FACTORS MAY IMPACT ON FOOD CONSUMPTION, IT APPEARED TO US THAT FOOD WASTE WAS MOST OFTEN CAUSED BY STUDENTS SIMPLY NOT LIKING THE ITEMS BEING SERVED. IN ONE SCHOOL, FOR EXAMPLE, SEVERAL CHILDREN SPECIFICALLY REQUESTED THAT GREEN BEANS NOT BE ADDED TO THEIR LUNCHES. WHEN THEIR REQUESTS WERE DENIED THEY THREW THE ITEM AWAY UNTOUCHED. WE ALSO FOUND THAT THE SAME ITEMS WERE NOT CONSISTENTLY ACCEPTED OR REJECTED. FOR EXAMPLE, TUNA FISH WAS WELL RECEIVED IN ONE SCHOOL, BUT 30 PERCENT OF IT WAS WASTED IN ANOTHER SCHOOL.

ALTHOUGH COMPREHENSIVE STUDIES ARE NOT AVAILABLE ON THE EFFECTIVENESS OF NUTRITION EDUCATION IN IMPROVING CHILDREN'S DIETS, THERE ARE SOME INDICATIONS THAT WELL-DESIGNED AND IMPLEMENTED NUTRITION EDUCATION PROGRAMS HAVE A FAVORABLE IMPACT, INCLUDING SIGNIFICANT REDUCTIONS IN PLATE WASTE. HOWEVER, NUTRITION EDUCATION HAS A LOW PRIORITY WITH SCHOOL ADMINISTRATORS RESPONSIBLE FOR CURRICULUM PLANNING.

THE DEPARTMENT IS CURRENTLY STUDYING PLATE WASTE IN THE SCHOOL LUNCH PROGRAM ON A NATIONAL SCALE AND EXPECTS THE RESULTS TO BE AVAILABLE IN LATE 1977.

WE BELIEVE THAT TO REDUCE FOOD WASTE THE DEPARTMENT SHOULD:

- ENCOURAGE MORE NUTRITION EDUCATION IN SCHOOL HEALTH PROGRAMS TO DEVELOP PROPER EATING HABITS AT AN EARLY AGE. WE NOTE THAT THE DEPARTMENT'S PROPOSED CHANGES TO THE SCHOOL LUNCH REGULATIONS ENCOURAGE NUTRITION EDUCATION AND THAT LEGISLATION PRESENTLY BEFORE A HOUSE-SENATE CONFERENCE COMMITTEE CALLS FOR EXPANDED NUTRITION EDUCATION. WE SUPPORT THESE CHANGES.
- ENCOURAGE LOCAL SCHOOL AUTHORITIES TO USE DECENTRALIZED MENU PLANNING TO MEET THE TASTES OF CHILDREN FROM VARIOUS CULTURAL AND ETHNIC BACKGROUNDS AND OFFER A WIDE SELECTION OF FOODS THAT ARE HIGHLY PREFERRED AND PALATABLE. THE DEPARTMENT'S PROPOSED REGULATIONS WOULD REQUIRE STUDENT INVOLVEMENT IN MENU PLANNING AND ENCOURAGE PARENT INVOLVEMENT IN SCHOOL LUNCH ACTIVITIES.

WE SUPPORT THIS PROPOSAL, BUT WE BELIEVE PARENT INVOLVEMENT IN MENU PLANNING COULD HAVE SUBSTANTIAL POTENTIAL FOR REDUCING PLATE WASTE AND SHOULD BE SPECIFICALLY REQUIRED.

--ENCOURAGE LOCAL SCHOOL AUTHORITIES TO IMPROVE LUNCHROOM ATMOSPHERE AND CONDITIONS.

--CONSIDER THE USE OF A NUTRIENT STANDARD AS AN OPTION TO THE TYPE A PATTERN TO PROVIDE GREATER FLEXIBILITY IN MENU PLANNING. THE PROPOSED REGULATIONS STATE THAT THE DEPARTMENT IS CONTINUING TO EXPLORE ALTERNATIVES TO THE TRADITIONAL MENU PLANNING APPROACH AND REQUESTS PUBLIC COMMENT ON THE USE OF A NUTRIENT STANDARD.